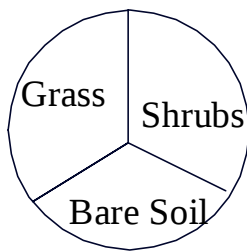




THE COVEY HEADQUARTERS

Volume 6 Issue 2 Summer 2007

This newsletter is aimed at cooperators and sportspeople in Missouri to provide information on restoring quail. This is a joint effort of the Missouri Department of Conservation, USDA-Natural Resources Conservation Service, and University of Missouri Extension. If you would like to be removed from this mailing list or have suggestions for future articles please contact jeff.powelson@mdc.mo.gov or 816-232-6555 x122 or write to the address shown.



The name of this newsletter is taken from an old concept.....that a quail covey operates from a headquarters (shrubby cover). If the rest of the covey's habitat needs are nearby, a covey should be present. We are encouraging landowners to manage their quail habitat according to this concept. Use shrubs as the cornerstone for your quail management efforts. Manage for a diverse grass, broadleaf weed and legume mixture and provide bare ground with row crops, food plots or light disking **right next to** the shrubby area.

Good Things Happening for Quail in Missouri!

Made possible by the Missouri Department of Conservation, Partners, and Missouri Landowners – Keep up the good work!

Private Land Accomplishments:

- Through a new cooperative agreement, the Conservation Reserve Enhancement Program (CREP) was expanded to parts of 79 counties in Missouri. The Farm Service Agency has partnered with the Missouri Department of Conservation, the Missouri Department of Natural Resources, the Missouri Association of Soil and Water Conservation Districts, the Natural Resource Conservation Service and the Missouri Department of Agriculture. The new CREP agreement will potentially impact 20,000 acres in Missouri. Under the new agreement, only native vegetation will be established and mid-contract management practices will be required on most CREP practices. In 2006, the Missouri Department of Conservation contributed \$1,000,000 to this cooperative agreement. Many of the CREP watersheds also occur in bobwhite quail and grassland focus areas. Visit your local USDA office to see if you have land that qualifies for CREP.
- As of April 26, 2007 a total of 21,900 acres of quail-friendly field borders have been established through USDA's CP33 field border program. Missouri was awarded an additional 10,000 acres to enroll into the program. Counties with over 1,000 acres enrolled include Caldwell, Cass, Saline, and Scott.
- The Missouri Department of Conservation completed the second year of CP33 monitoring. Field researchers increased the sample size from 40 to 60 sites. As a part of the study, researchers are looking at quail and grassland bird responses as a result of CP33 buffers. Staff is also monitoring soil erosion within the buffer to determine if additional resource concerns are being addressed. We will publish some of this data in future issues.
- In 2006, the Missouri Department of Conservation and the Missouri Association of Soil and Water Districts continued a three year CRP initiative focusing on creating shrubby cover adjacent to CRP fields, increasing plant diversity and requiring CRP cooperators to voluntarily sign-up for the mid-contract management. Through the CRP-BOB program, \$240,000 in cost share has been allocated for edge feathering, food plot

establishment, invasive vegetation control and management practices (prescribed burning, light disking or spraying).

- In 2006, Missouri NRCS signed 63 new Wildlife Habitat Improvement Program (WHIP) contracts, for \$849,193.86 in cost share which impacted 7,754.3 acres of habitat. In Missouri, WHIP focuses primarily on bobwhite quail management and prairie, savanna/woodland and glade restoration.
- In 2006, active WHIP contracts completed 3,826.1 acres of quail and grassland bird-friendly habitat work. In 2006, existing Environmental Quality Incentive Program (EQIP) contracts applied 33,613 acres of quail and grassland bird habitat work. Quail and grassland bird-friendly conservation practices include (338) Prescribed Burning, (643) Restoration and Management of Rare and Declining Habitats, (645) Upland Wildlife Habitat Management, and (647) Early Successional Habitat Management.
- In 2006, the Spring River watershed in southwest Missouri was chosen for the Conservation Security Program (CSP). A total of 356 contracts were approved for \$2,850,206 in conservation payments. Of the 356 contracts, 344 were Tier 2 or 3 – meaning these contracts will address wildlife concerns, primarily quail, on the entire operation.
- Statewide, landowners and operators participating in CSP have already installed miles of native grass field borders, acres of shrub plantings and acres of unharvested grain plots as a result of the program. For example:
 - o In 2006, NRCS reported 2,846,825 linear feet of native grass field borders installed through CSP (basically a 30 foot field border on each side of I-70 from Kansas City to St. Louis).
 - o NRCS in Saline, Scott, Pemiscot, Mississippi and Dunklin Counties reported over 1 million linear feet of native grass field borders installed through CP33 or CSP field borders as a result of CSP. Over the past couple of years over 15 million linear feet of field borders have been installed statewide.
- Through the Missouri Department of Conservation Landowner Cost Share Program, 803 landowners received approximately \$1.3 million in cost share. Of that, an estimated \$614,617 went towards quail and grassland bird-friendly practices, impacting 7,947.4 acres.
- Through a cooperative agreement with Quail Unlimited and the Missouri Department of Conservation at least 2,780 acres of private land were improved for quail and grassland birds in 2006. A total of 119 projects were completed with a total of \$103,748 in cost share spent on quail and grassland bird-friendly practices. Since 2001, this cooperative agreement has administered \$565,918 in cost share. Quail Unlimited and the Missouri Department of Conservation have also hired a Technical Service Biologist for three years to assist private landowners in northeast Missouri.
- The Missouri Department of Conservation entered into a cooperative agreement with Pheasants Forever and Quail Forever chapters in Missouri. Through this agreement, \$90,000 in cost-share will be available to private landowners for quail and pheasant habitat restoration.
- Numerous landowner workshops were conducted by Department of Conservation staff. Landowner workshops continue to focus on quail management, cost share programs, CRP management, and prescribed burning. In fiscal year 2006, the Private Land Services Division reported that 16,412 individuals attended workshops and training events sponsored by the department and partners.

Public Land Accomplishments:

- A total of 67,436 acres of quail and grassland bird habitat were improved or disturbed on MDC Conservation Areas. Including 134 miles of edge development on Conservation Areas.
- Department staff conducted spring bird surveys (9 species) and fall whistle counts on 19 Conservation Areas to track and monitor quail and grassland bird responses to management activities.
- Completed a Quail and Grassland Bird management review and training session for area managers and department staff.

Direct Seeding Shrubs? How to seed future covey headquarters

Aaron P. Jeffries, Upland Game Coordinator, Jefferson City, MO

Landowners interested in creating good quail habitat should have 10 to 25% of each "quail unit" or field in shrubby cover. Shrubby cover can be created by edge feathering, creating downed tree structures, enhancing native shrub thickets and by planting shrubs. When planting shrubs, many people use bare root or container grown plants. However, shrubs can also be established by seeding if you follow a few critical steps.

The first step is to find a good seed source. Some native seed companies sell shrub seed. Wild plum, shrub dogwoods (roughleaf, gray, swamp, etc...), elderberry, and blackberry are all good choices. Only buy native shrub seed by the Pure Live Seed (PLS) pound. If you can't find a seed source you can also collect your own seed by harvesting the fruits when they are ripe. If you collect your own seed, realize you will not know the germination rate. The amount of PLS for hand collected seed may range from 20 to 90%.

If you collect your own seeds, harvest the fruits when they are ripe. Depending on the species, this can be from mid summer through early fall. Watch the fruits closely as birds and other animals are also waiting for the fruits to ripen. I have found that wild plum is usually ripe in August and the shrub dogwoods (depending on the species) ripen in August and September. If possible try to clean the pulp from the seed. Clean seed is easier to spread and will not attract rodents.

The next step is to choose a site for your covey headquarter. The covey headquarter should be located adjacent to diverse grassland or other early successional habitats such as food plots, crop fields or disturbed fields. Site preparation is critical when direct seeding shrubs. Choose a covey headquarter site that is at least 30'x50' in size (1,500 ft²). New covey headquarter sites should be sprayed with an herbicide in the summer and then disked 2 or 3 weeks later to prepare a clean seedbed. Have the site ready to be seeded by late summer or early fall. I have found that many native shrub species should be seeded in the summer or early fall and not the spring.

The next step is to simply broadcast the seed or fruit on the prepared site. Again, plots should be seeded in late summer or early fall. Avoid seeding shrubs in the winter or spring. After broadcasting the seed, simply drag a harrow or cedar tree over the area. As a rule of thumb, the seed should be no deeper than twice the diameter of the seed (about ½ to 1 inch deep for wild plum).

How much seed should you plant in each covey headquarter? If you hand collect seeds you will not know the germination rate. Use the chart below for general recommendations for seeding covey headquarters with Pure Live Seed (PLS) or hand collected fruits. The following seeding rates are for a 1,500 ft² covey headquarter. Again, plots should be seeded in late summer.

Specie	Pounds of clean PLS seed per 1,500 ft covey headquarter	Pounds of fruit per covey headquarter
Wild Plum	3/4-1 lb	1-2 lb
Shrub Dogwood	1/8-1/4 lb	3/4-1 lb
American Elderberry	1/20 lb	4/10 lb
Blackberry	1/8-1/4 lb	3 lb

The following year, make sure to control annual grasses with a selective grass herbicide. Since most shrub seedlings will be less than 10 inches in height you might be able to high mow the plot. To provide instant brushy cover, add a few downed trees to the middle of the covey headquarter. Be patient, a direct seeding will take several years to provide adequate shrubby cover for quail. I have an elderberry seeding on our farm that is 3 years old and over 6 feet tall. We also have several wild plum seedlings that are one year old and only about 6 inches tall. The low cost of hand collecting or buying seed makes this a fun project to try during the summer.

Quail Reproduction

The quail's reproductive capacity is large and their mating behaviors are impressive.

- The nesting season is long, lasting from April to October.
- Hens lay 12 to 18 eggs per nest.
- Chicks are precocial, being able to follow adults soon after hatching.
- Their breeding behavior is classified as both monogamous and polygamous, with the females sometimes leaving their mate and chicks to find another mate and start another nest.
- With the females being so promiscuous, males end up incubating about 25% of the nests.

All of the above behaviors allow one hen to produce up to 3 broods of 10 or so chicks per brood. The end result of this is a tremendous ability to rebound from high mortality during winter. Make sure you provide good nesting habitat on your farm. Nesting cover consists of grasses such as redtop, timothy, orchardgrass, little bluestem, and broomsedge. There should be adequate litter from the previous year for the hen to build the nest.

Your nesting grass should also be located next to good brood rearing habitat. Brood rearing habitat consists of legumes and annual weeds with plenty of bare ground. This habitat is typically found in areas that have been left fallow one to two years after soil disturbance. A food plot that was left idle is a great example of brood habitat. The annual weeds that appear in an idled food plot provide an abundance of insects needed for rapid chick development and are often used by broods as feeding areas.



Did You Know???

Studies in Missouri, Georgia and Florida using radio-collared quail showed that hunting dogs usually find about half the coveys on a given farm. This doesn't mean the dogs aren't good. Many factors enter into a dog's ability to scent quail. In fact, it's not necessarily the quail they smell, but the bacteria on skin cells that the quail shed.

Summer Covey Headquarters Calendar

June

Quail hatch peaks this month.

Conduct breeding bird surveys this month.

Milo, millet, and forage sorghum food plots should be planted by June 30.

Contact NRCS or MDC for burn plan assistance this month.

Mow newly planted native grass fields to a height of 6-8 inches to control weed competition.

Spray actively growing Johnsongrass.

July

Excessive June and July rains will shift the peak quail hatch into August.

Mow firebreaks for fall burns several times over the summer to maintain.

Spray sericea lespedeza through Sept.

Mow newly planted native grass fields to a height of 8-12 inches to control weed competition.

Disk or burn your CRP acres starting July 16th.

Use herbicides to set back native grass CRP starting July 16th.

August

Quail and other grassland birds continue to nest – stay off your mowers!

Till firebreaks now to prepare for late summer and fall burns.

Mow or burn fescue and brome to prepare for fall herbicide treatments.

Hand collect plum and dogwood seed late this month and plant the seed to establish covey headquarters.

Build it and they will come... GOT EDGE?

My family owns a 270-acre farm in Cole County that consisted of cedar-infested hardwoods and fescue fields when we acquired the property about 15 years ago. Since then, we (dad and I) have randomly planted food plots and haphazardly planted 1,000+ mail order trees (mostly pine) from MDC annually. We permanently excluded cattle about 4 years ago to let the place "grow up."

Shortly after removing the cattle we started conducting prescribed burns. We have primarily targeted the cedar-infested hardwoods that were void of an understory and any valuable timber. The fire has killed many of the cedars and reduced woody cover at ground level. Sunlight, water, and nutrients previously allocated to cedars and other fire intolerant species has given birth to a dense understory rich in both food and cover.

Several successful years of prescribed burning resulted in measurable improvements in habitat; however, we were still not seeing the wildlife we expected to. That's when we kicked our efforts into high gear with edge feathering and putting away the brush hog. I must admit I was very reluctant to commit to such a project, but was encouraged by habitat articles in The Covey Headquarters Newsletter and Missouri Conservationist. Dad did not warm up to the idea of sprayers and chainsaws and sat this one out.

In October 2003 we began by killing fescue along the woodland edge; 3 selected 30-60 foot wide strips several hundred yards each (4 acres total) were sprayed using an ATV with a sprayer attached. It was as easy as mowing grass! In May we disked up the dead fescue strips and sowed the plots. A mixture of big bluestem, little bluestem, Indian grass, native wildflowers, and lespedeza were sown by hand and rolled in by driving a truck up and down the rows to ensure good seed-to-soil contact. By August much of the grass was already over our heads. When walking through the strips insects scatter about and cling to your clothing, and are so loud you can hardly hear yourself think!

By September the weather began to cool and I grabbed the chainsaw. I started cutting trees along the woodland edge and dropping them into the warm-season grass strips. All cedars and most others were fair game. Only an occasional whopper-sized, mast-producing tree was spared. Remember that proper, fresh edge feathering will look messy and most people will think you're crazy if you show them what you've done. Remain calm, give it a few years and/or sweep a prescribed burn through there and let succession catch up. One afternoon was all it took me to edge out the trees in each of the 3 warm-season grass strips. I also purchased my own ATV sprayer and boom. In just two afternoons I sprayed the fescue around edges and odd corners of the fields – over 10 acres in all. It paid for itself the first time I used it.

We've engaged in more meaningful wildlife habitat improvement in one year than the first 10 years combined! Better yet, costs were offset by enrolling in a Quail Habitat Initiative contract (cooperative cost share program funded by Quail Unlimited and the Missouri Department of Conservation) and recently the Wildlife Habitat Improvement Program. I've learned you can knock out an amazing amount of work with the chainsaw, ATV sprayer, or tractor in a few short hours. In fact, rounding up the gear and getting to the farm is my biggest obstacle; once I'm there the work melts away. Pack a lunch, put your nose to the grind, and break a sweat. In case you're as lukewarm about this as I was, consider that your efforts benefit quail but are not limited to them. You will be creating excellent habitat for both game and non-game species alike by creating/restoring something that has become extinct on many landscapes – edge. Hey, I got edge, do you? **Adam Doerhoff, Conservation Agent, Adair/Macon Counties**

Did You Know???

By spending a little money and dedicating a few weekends each year you can get quail and grassland birds back on your property for the long haul. Flushing a covey of quail from habitat that you created is a very rewarding experience. Why spend \$1,000's to buy a call-back system and release birds yearly to keep your quail artificially stocked? Create habitat and the birds will respond.

Make Your Fescue Pasture More Attractive to Cattle and Wildlife

Craig Roberts, State Forage Specialist, University of Missouri

Most of Missouri pasture is tall fescue. And nearly all of our tall fescue is common Kentucky 31, a cultivar that is usually infected with a toxic fungus. Infected Kentucky 31 causes fescue toxicosis, a livestock disorder that costs US livestock producers between \$600 and \$900 million each year. Without proper management, infected Kentucky 31 reduces steer gains, calving percentage, and milk production.

There are many coffee shop suggestions for managing infected tall fescue. Some suggestions involve breeding, some involve feeding. However, most suggestions are only based on hearsay and don't even work. There are, however, some suggestions that have proven to be wise recommendations. They have been tested in controlled experiments and can partially reduce the effect of toxic tall fescue. Of these recommendations, there are three big ones. The "big three" are listed below. Note, two of the three recommendations call for anything but straight tall fescue.

The first recommendation is to have a summer pasture. Why a summer pasture? Because, infected tall fescue is most toxic during late May through June, so moving cattle onto another pasture can reduce the amount of toxin consumed. Moving to a summer pasture can also provide excellent forage, as warm-season forages are leafy. Some of those forages that provide excellent forage supply in June and July include native warm-season grasses, which are also ideal for wildlife. These would include big bluestem, Indiangrass, and eastern gamagrass. When added to a pasture system with cool-season grasses, each species should be utilized during the prime growing season, thereby enabling the producer to provide excellent nutrition throughout the year.

One other forage that provides excellent summer pasture is annual lespedeza. It does not require its own field, as it can be interseeded into the tall fescue sod and grazed as a near pure stand in late July and throughout August; during these months, it takes over a pasture as the tall fescue enters dormancy. Lespedeza is also good for quail, supplying bugging areas in the summer, and food (seeds) during fall and winter.

The second recommendation is to dilute infected tall fescue pasture with other forages. The easiest forages to interseed would be the red and white clovers. They are frost-seeded in late January and early February. After being broadcast, the clover seed find their way to the soil surface as the ice and snow melt and the ground cycles between freezing and thawing. Research has shown that interseeding clover into a tall fescue pasture will increase steer gains by at least 0.15 lb/day, though the increase is usually larger.

The third of the "big three" recommendation is to supplement the diet. Supplementation involves corn, whole soybean, soyhulls, or other byproduct feeds. The amount to supplement should be determined by a local Extension Livestock Specialist. If the supplement is starchy, as is the case with corn, too much supplement will cause the forage to be undigested.

In addition to the "big three" recommendations listed above, there are some other wise practices. One is to ammoniate the hay. Treating infected tall fescue hay with ammonia does two things—it renders the forage highly digestible, and it partly detoxifies the hay. It has been shown to improve animal gains significantly. Another practice is careful nitrogen fertilization. If a fescue-clover pasture is fertilized with high rates of N, the grass portion will dominate the clover, eventually crowding it out. Also, the high rate of N will cause toxins to increase, because the fescue toxins require nitrogen.

So, is straight tall fescue good for cattle and wildlife? No, not if the fescue is common Kentucky 31. And most of Missouri is just that, which happens to be the kind of tall fescue that causes problems. So it is best to manage in a way that reduces fescue toxicosis. Two of the "big three" recommendations call for summer pastures to complement the cool-season pastures and interseeding other forages, including legumes. Both of these approaches also can be good for quail and other grassland birds.



Missouri Department of Conservation Receives National Quail Award

The Missouri Department of Conservation received the 2007 Northern Bobwhite Conservation Initiative (NBCI) Group Achievement Award at the North American Wildlife and Natural Resource Conference in Portland, Oregon. The award was presented by Quail Unlimited in cooperation with the Southeast Quail Study Group for the overall effort of the Department toward implementation of NBCI. Among bobwhite quail progress credited to the Department was utilization of the CRP CP-33 acreage allotment for Missouri, establishment of a Conservation Reserve Enhancement Program for quail, and coordination with USDA to make quail a priority in the Environmental Quality Incentive Program, Wildlife Habitat Incentive Program, and the Conservation Security Program. All Department staff that have worked to implement the NBCI plan share in this Group Achievement Award.

Strip Spraying Native Grasses for Diversity

For many landowners, spring is a very busy time of year. Sometimes even the most well planned prescribed burn doesn't get completed on the target date, often due to weather restrictions or logistical problems. This can be troublesome, especially when native grass stands are the target burn units. Native grass stands should not be burned after mid-March, if you are interested in wildlife habitat, because burning after then tends to stimulate the stand, essentially thickening it up. This would be a good practice for forage production, but not for wildlife management.

Instead of burning in late spring or postponing the burn until the following year, plan on strip spraying in the summer. Strip spraying is the practice of using reduced chemical rates to suppress or set-back dominant grasses, therefore providing openings in the stand for forbs, legumes and bare ground. It is a viable alternative to light disking strips through a grass stand and it doesn't leave rough ground.

Recommended spraying dates for native warm-season grasses are May 1-September 15. For CRP acres, do not spray until after July 15 through September 15. Cool-season grasses can also be strip sprayed from green-up through April 30 or in the fall green-up period. Use the label rates for suppression on which ever chemical you choose. For example, with Round-up original (glyphosate), use 8-16 oz. per 20 gallons of water for perennial grass suppression. Spray 25-75 ft. strips on the contour each year and alternate strips each year until all acres have been treated. Mowing can be used prior to spraying for more efficient chemical coverage.

Oftentimes desirable annual forbs will be released from the sod-bound grass stand after spraying, but over seeding of legumes can be used for additional benefit. Many planted native grass stands are completely dominated by grasses and desperately need to be managed for higher plant diversity. Upland birds will use these pure grass stands at times, but they can be better managed through strip spraying. The end result is a field with higher plant diversity that provides nesting, brood rearing, roosting and heavy winter cover.

Did You Know???

Don't sweat it if you can't get your food plots planted this year, or what you do plant gets dominated by weeds and doesn't produce much grain. These areas will actually be ideal for quail broods. Fallow food plots serve as that "bare ground with a canopy of annual plants" component of quail habitat. Quail broods will use them throughout the summer and into the fall as brooding habitat. When fall and winter come they will have produced a diversity of quail foods and in some cases winter roosting cover.

CRP NEWS

USDA will not hold a general CRP signup in 2007 or 2008, but the Continuous CRP program will continue to take enrollments.

Dogwood Carbon™ (a subsidiary of the Missouri Farmers Union), is purchasing CRP carbon credits. Opportunities exist for payments on grass and tree planted acres. Visit dogwoodcarbon.com for more information.

The Internal Revenue Service is considering charging self employment tax on CRP rental payments. Check Internal Revenue Service Notice 2006-108, or discuss with your tax preparer.

Control These Pesky Weeds This Summer

Sericea lespedeza – treat with triclopyr or metsulfuron June through September.

Teasel – treat when actively growing with glyphosate, 2, 4-D amine, or triclopyr.

Multi-flora rose – mow during growing season and treat stumps with 50% glyphosate mix.

Johnsongrass – treat when actively growing with glyphosate.

Most weeds require several treatments over several years to completely control them. Herbicide labels constantly change. **Always read and follow all label instructions.**

Mark Your Calendar

July 19-22, 2007 – “Flight to the Future” National Quail Unlimited Convention in Overland Park, KS. A habitat demonstration day is scheduled for July 18th. Visit qu.org for more information.



The Covey Headquarters Newsletter
3915 Oakland Ave
St. Joseph, MO 64506

RETURN SERVICE REQUESTED